

WHAT IS CLAIMED IS:

1. A liquid crystal device having a plurality of pixels that modulates light in accordance with a given image signal, the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; and

a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion,

the exit side substrate portion comprising an exit side substrate, a first electrode that drives the liquid crystal layer formed on the exit side substrate, and an exit side cover arranged on an exit side with respect to the exit side substrate,

the entrance side substrate portion comprising an entrance side substrate and a second electrode that drives the liquid crystal layer formed on the entrance side substrate, and

the exit side cover having an absolute value of a coefficient of thermal expansion of less than $37 \times 10^{-7}/^{\circ}\text{C}$.

2. The liquid crystal device according to claim 1, the absolute value of the coefficient of thermal expansion of the exit side cover being not more than $10 \times 10^{-7}/^{\circ}\text{C}$.

3. The liquid crystal device according to claim 1, the entrance side substrate portion further comprising an entrance side cover arranged on an entrance side with respect to the entrance side substrate, the entrance side cover having an absolute value of a coefficient of thermal expansion of less than $37 \times 10^{-7}/^{\circ}\text{C}$.

4. The liquid crystal device according to claim 1, the entrance side substrate portion further comprising an entrance side cover arranged on an entrance side with respect to the entrance side substrate, the entrance side cover having an absolute value of a coefficient of thermal expansion of not more than $10 \times 10^{-7}/^{\circ}\text{C}$.

5. A liquid crystal device having a plurality of pixels that modulates light in accordance with a given image signal, the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; and

a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion,

the exit side substrate portion comprising an exit side substrate and a first electrode that drives the liquid crystal layer formed on the exit side substrate,

5 the entrance side substrate portion comprising an entrance side substrate, a second electrode that drives the liquid crystal layer formed on the entrance side substrate, and an entrance side cover arranged on an entrance side with respect to the entrance side substrate, and

10 the entrance side cover having an absolute value of a coefficient of thermal expansion of less than $37 \times 10^{-7}/^{\circ}\text{C}$.

6. The liquid crystal device according to claim 5, the absolute value of the coefficient of thermal expansion of the entrance side cover being not more than $10 \times 10^{-7}/^{\circ}\text{C}$.

7. A projector for displaying an image by projecting it, comprising:
a liquid crystal device having a plurality of pixels that emits light after modulating in accordance with a given image signal;
an illumination system that irradiates light to the liquid crystal device;
and

a projection system that projects emitted from the liquid crystal device,
20 the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; and

25 a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion,

the exit side substrate portion comprising an exit side substrate on which a first electrode that drives the liquid crystal layer formed on the exit side substrate, and an exit side cover arranged on an exit side with respect to the exit side substrate,

30 the entrance side substrate portion comprising an entrance side substrate and a second electrode that drives the liquid crystal layer formed on the entrance side substrate, and

the exit side cover having an absolute value of a coefficient of thermal expansion of less than $37 \times 10^{-7}/^{\circ}\text{C}$.

8. The projector according to claim 7, the absolute value of the coefficient of thermal expansion of the exit side cover being not more than $10 \times 10^{-7}/^{\circ}\text{C}$.

9. The projector according to claim 7, the entrance side substrate portion further comprising an entrance side cover arranged on an entrance side with respect to the entrance side substrate, the entrance side cover having an absolute value of a coefficient of thermal expansion of less than $37 \times 10^{-7}/^{\circ}\text{C}$.

10. The projector according to claim 7, the entrance side substrate portion further comprising an entrance side cover arranged on an entrance side with respect to the entrance side substrate, the entrance side cover having an absolute value of a coefficient of thermal expansion of not more than $10 \times 10^{-7}/^{\circ}\text{C}$.

11. A projector for displaying an image by projecting, comprising:
a liquid crystal device having a plurality of pixels that emits light after modulating in accordance with a given image signal;
an illumination system that irradiates light to the liquid crystal device;
and

a projection system that projects light emitted from the liquid crystal device, the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; and

a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion,

the exit side substrate portion comprising an exit side substrate on which a first electrode that drives the liquid crystal layer formed on the exit side substrate,

the entrance side substrate portion comprising an entrance side substrate a second electrode that drives the liquid crystal layer formed on the entrance side substrate, and an entrance side cover arranged on an entrance side with respect to the entrance side substrate, and

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